Before the COPYRIGHT OFFICE LIBRARY OF CONGRESS Washington, DC

In the Matter of)
Exemption to Prohibition on)
Circumvention of Copyright Protection)
Systems for Access Control Technologies)

Docket No. RM 2011-07

To: The Copyright Office

COMMENTS OF METROPCS COMMUNICATIONS, INC. ON THE NOTICE OF INQUIRY

MetroPCS Communications, Inc. ("MetroPCS") hereby submits its comments in response

to the *Notice of Inquiry*¹ issued in the above-captioned proceeding in accordance with the Digital

Millennium Copyright Act ("DMCA"). In summary, MetroPCS respectfully requests that the

Copyright Office continue for an additional three year period the exemption² for computer

programs that operate wireless devices³ from the prohibition on circumvention of copyright

protection systems for access control technology. The following is respectfully shown:

² Although MetroPCS requests that the Copyright Office "continue" the 2010 exemption throughout these Comments, the exemption proposed by MetroPCS, as stated here, differs slightly from the exemption that was granted in 2010. The minor language changes proposed by MetroPCS are intended to allow all wireless device owners (not merely wireless "handset" owners) to have the opportunity to use their devices on a communications network of their choosing, and to prevent wireless providers from using any loopholes to deny consumers the full, pro-competitive benefits intended by the Copyright Office with this exemption.

¹ See Copyright Office Notice of Inquiry and Request for Comments on the Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technology, 76 Fed. Reg. 60398 (Sep. 29, 2011) (to be codified at 37 C.F.R. pt. 201).

³ Copyright Office Final Rule on the Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technology ("Final Rule") 75 Fed. Reg. 43825 (July. 27, 2010) (to be codified at 37 C.F.R. pt. 201). For the purposes of these Comments, the term "handsets" refers to any device used to receive wireless

I. PROPOSED CLASS EXEMPTION AND SUMMARY

Computer programs, in the form of firmware or software, including data used by those programs, that enable wireless devices to connect to a wireless communications network, when circumvention is initiated by the owner of the copy of the computer program solely in order to connect to a wireless communications network and access to such communications network is authorized by the operator of such communications network.

The above-proposed class exemption is substantially similar to the class of works recommended and approved by the Copyright Office in 2010 with certain changes, intended primarily to clarify and improve the proposed class exemption.⁴ The approval of the existing similar exemption in 2010 is significant because "the Register's prior determinations have some precedential value."⁵ Continuing the exemption for wireless devices would have substantial public interest benefits, and the actual and likely harms that would result from a denial (and the concomitant resurgence of wireless device locking) remain the same – if not worse – than in 2010. Given that "the Register is likely to reach a similar conclusion" with respect to a renewed exemption "*when similar facts have been presented*,"⁶ the facts presented herein provide ample justification for renewal of the exemption as proposed. As a general matter, the behavior of the nationwide carriers – which have had the most aggressive device locking polices – has not improved since the current exemption was approved. And, the mere fact that some carriers may now sell a small number of unlocked wireless devices does not obviate the need for a renewed exemption. The Register found in 2010 – and will find now – that "[t]here are still legacy

services.

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⁴ Attachment A hereto contains a redlined version of the proposed exemption which highlights the changes made to the current exemption. The justification for each proposed change is set forth within.

⁵ Recommendation of the Register of Copyrights, 115 (rel. June 11, 2010).

⁶ Id.

phones . . . that are locked and cannot be used on an alternative wireless network."⁷ These legacy customers clearly should be allowed to reap the benefits of network choice that were intended by the similar exemptions granted in 2006 and 2010. Further, as economic conditions have worsened, the ability of customers to afford new devices, or to enter into new long term contracts to get an updated device, has decreased significantly, making the need for the exemption more pressing. As the average price for new wireless devices continues to rise, the need for consumers to be able to use existing devices on other networks has increased. Finally, as wireless device services have moved to smartphones, the amount of copyrighted works licensed to such devices has increased, and the amount of copyrighted material that would need to be re-licensed if a customer switches carriers has increased dramatically.⁸

The Copyright Office was correct in 2006, and again in 2010, to adopt an exemption from the anticircumvention provisions of the DMCA for computer programs that operate wireless devices, and MetroPCS strongly recommends that an exemption of this type be renewed for an additional three-year period. Software locks on wireless devices are unnecessary for the protection of copyrighted works – the DMCA's primary purpose – and in fact are used primarily for purposes other than protection of copyrighted works. Such locks are primarily used to enforce contracts by binding devices to specific carriers and, consequently, to block consumers' freedom of choice for wireless service. The adoption of this exemption by the Copyright Office in 2006 and 2010 has allowed a significant number of United States consumers to utilize existing devices to purchase competing communications services and to continue to enjoy lawfully licensed copyrighted works. A failure to renew this exemption would substantially harm

 $^{^{7}}$ *Id*. at 154.

⁸ Indeed, if a licensee has a moderate amount of copyrighted works on an existing wireless device that cannot be (Continued...)

consumers by allowing carriers to prevent customers from utilizing devices which they have purchased to receive service on competing carriers' networks and to have to re-license copyrighted works. As demonstrated below, renewing the exemption will continue to foster competition in the wireless marketplace without adversely impacting copyrighted works.

A. The Clarifying Changes Proposed by MetroPCS are Justified

Although MetroPCS proposes some minor clarifying changes to the prior exemption, MetroPCS' revised formulation does not fundamentally alter the substance, scope or intent behind the Copyright Office's existing exemption. As an initial matter, MetroPCS recommends the addition of the phrase "including data used by those programs" into the renewed exemption. This clarifies that the scope of the information that device owners are permitted to change, or direct to be changed, includes data that instructs the device to seek out a particular network. This language change is consistent with the 2010 *Final Rule*, as evidenced by the Copyright Office conclusion that certain data may be changed in order to accomplish the wireless device unlocking without jeopardizing the underlying exemption.⁹ The change proposed by MetroPCS provides additional certainty for device owners and by more clearly codifying the intent of the current exemption.

The current exemption also includes the phrase "wireless telephone handsets." MetroPCS submits that the Copyright Office should change this phrase because "wireless telephone handsets" is not commonly or traditionally used in the communications world, and is too limited. "Wireless telephone handsets" may not encompass a variety of common devices that

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used on another system, the cost to change services could be in the tens, if not hundreds, of dollars. ⁹ *Final Rule* at 43831.

consumers currently utilize over wireless communications networks and may use in the future. For instance, under some characterizations, certain devices such as tablets, wireless broadband cards inserted into computers and other wireless devices that have keyboards and computer capability, could be argued to fall outside of the definition or the plain English understanding of "wireless telephone handsets."¹⁰ In the ever-converging wireless ecosystem, a number of products (such as tablets, netbooks, laptop aircards and others) operate over wireless communications networks, and should enjoy comparable anti-locking protection without a debate whether they qualify as telephone handsets.¹¹ Many consumers treat these devices as interchangeable with traditional devices because they typically offer the same or similar functionality as telephone handsets, including interconnected VoIP services.¹² As discussed below, such devices may – and do – have their computer software locked by the original carriers, and such locks would prevent consumers from using such devices on a different carrier's network. Consequently, all of the reasons cited by the Copyright Office as to why wireless devices should be included in the exemption would apply equally to those functionally equivalent wireless communications devices. Thus, MetroPCS proposes that the exemption use the phrase "wireless communications devices" in order to clarify the definition and to make it flexible and

¹⁰ MetroPCS submits that the phrase "wireless telephone handsets" should be interpreted to include all functionally equivalent wireless devices that can be used to complete communications wirelessly. The language change proposed by MetroPCS will avoid needless controversy on this point.

¹¹ Since the last exemption was adapted, simple feature phone handsets have evolved into smartphones which are essentially handheld computers with telecommunications capabilities. While smartphones would certainly fall within the definition of "wireless handsets", this sea change illustrates the rapid change in the industry and the need for a more inclusive definition. Further, when the exemption was initially adapted, tablets did not exist, but that fact presents no reason as to why the exemption should not apply to them as well. ¹² VoIP applications, such as Skype, can be used over many netbooks, smartphones and tablets and represent a

¹² VoIP applications, such as Skype, can be used over many netbooks, smartphones and tablets and represent a growing portion of voice traffic. Mobile VoIP alone is projected to represent 83 million voice lines by 2015. "Significant mobile-VoIP growth predicted," Cabling Installation & Maintenance (Aug. 16, 2011), *available at* <u>http://www.cablinginstall.com/index/display/article-display/0539464960/articles/cabling-installation-maintenance/news/wireless/2011/8/Significant-mobile-VoIP-growth-predicted.html (citing Amy Cravens, "The Business of Mobile VoIP: IP Voice Communications in the Enterprise," In Stat (Jan. 2011)).</u>

future proof. This would prevent all wireless products that may be used on wireless communications networks from being locked for use only on the original carrier's network.

Next, MetroPCS proposes that the Copyright Office use the phrase "wireless communications network," rather than the phrase "wireless telecommunications network." In some contexts, the term "telecommunications" is used as a term of art in the communications law field, based upon a statutory definition.¹³ In this statutory context, the term "telecommunications" can be used to distinguish common carrier "telecommunications services," such as interconnected voice services, from "information services," such as data, email and Internet access services.¹⁴ Clarifying that the exemption applies to a "wireless communications network" will eliminate any ambiguity surrounding whether data-centric devices (such as tablets) can be unlocked for the purpose of substantially operating over a competing carrier's data network. The exemption should apply to all traffic flowing over the wireless communications network – including Voice over Internet Protocol or VoIP traffic – and not be subject to changes in regulatory classifications that the FCC may make during the exemption period.¹⁵ In sum, the term "wireless communications network" more accurately describes the networks from which the devices receive services.

¹³ See 47 U.S.C. § 153(50), defining "telecommunications" as "the transmission, between or among points specified by the user, of information of the user's choosing, without change in the form or content of the information as sent and received."

¹⁴ An information service includes the underlying telecommunications service used to transport the data. 47 U.S.C. § 153(24). As such, use of the word "telecommunications" should include all capabilities of the device to connect to the network, regardless of whether only telecommunications or information services are provided.

¹⁵ There has been a long-standing debate whether VoIP services are telecommunications services and whether VoIP carriers are telecommunications carriers. *See, e.g.*, Petition for Declaratory Ruling of TW Telecom Inc., WC Docket No. 11-119 (filed Jul. 14, 2011). The Copyright Office can avoid getting embroiled in this debate by using the general term "wireless communications network".

II. BACKGROUND

MetroPCS has been a market innovator and mobile wireless success story since it commenced commercial operations in 2001. MetroPCS is a wireless-only communications company that offers wireless broadband mobile services in and around numerous major metropolitan areas throughout the United States on an affordable, flat-rate, predominately unlimited usage basis, with no annual contract. MetroPCS owns or has access to licenses covering a population of approximately 146 million people, and is constantly expanding its coverage to serve both new major metropolitan areas and areas surrounding existing metropolitan areas. MetroPCS' customers are able to use their service nationwide both through MetroPCS' own facilities and through roaming arrangements with other carriers. As of September 30, 2011, MetroPCS served more than 9.1 million subscribers and is the fifth-largest facilities-based wireless provider in the United States based on number of subscribers served.

MetroPCS also is an innovator. It rolled out the very first 4G long term evolution ("LTE") network in the United States and launched the world's first dual mode CDMA/LTE handset as well as the world's first dual mode CDMA/LTE handset based on the popular Android operating system.

MetroPCS' service plans are differentiated by being more affordable, predictable and flexible than the more complex long-term plans required by many of its competitors. Customers pay for service in advance, without restrictive credit limitations, with service plans currently beginning as low as \$40 per month, which includes all applicable taxes <u>and</u> regulatory fees. The low cost, fixed price, "all-you-can-eat" prepaid service offerings of MetroPCS have had the proconsumer effect of causing the large national carriers to begin offering unlimited, nationwide flat rate plans as well, either directly or through resellers. MetroPCS offers a wide array of wireless

devices for its services, including feature phones and smartphones, which allow customers the ability to talk, text, and access the Internet. Further, MetroPCS also provides competition to traditional wireline services. MetroPCS targets a mass market which is largely underserved by the other major wireless carriers. Unlike its national competitors who require long-term contracts, MetroPCS offers its services on a month-to-month basis and does not require its customers to sign a contract or pass a credit check. This makes beneficial wireless services accessible to persons who otherwise would be left behind by the wireless revolution. Not surprisingly, a growing percentage of MetroPCS' customers use their MetroPCS device as the primary, or even sole, means to access the Internet. In addition, a substantial portion of MetroPCS' subscribers use their MetroPCS wireless device as their primary or exclusive telecommunications service. MetroPCS' services also have fostered greater adoption of broadband by consumers since a significant percentage of MetroPCS customers are first-time wireless users. In short, MetroPCS is a positive competitive force in the wireless market.

As noted above, MetroPCS provides service to a significant number of lower income, credit challenged, underbanked and newly employed customers. These customers are especially sensitive to the cost of a device, which makes the ability of these customers to use previously acquired devices to receive service particularly attractive. In light of the ongoing national financial turmoil, this segment of the wireless consumer market will likely expand as displaced and struggling families look for new ways to save money. Finally, as MetroPCS has begun offering more robust data services, it has seen a significant increase in data usage, confirming the importance of its services to bridging the Internet divide.

In mid-2008, MetroPCS began allowing customers with existing code division multiple access ("CDMA") devices previously in use on other carrier networks to use their existing

devices on MetroPCS' service. Given the current economic downturn, an increasing number of subscribers have used this option to re-use their existing devices.¹⁶ MetroPCS does not purchase devices from the other carriers, or from any other sources, and bulk re-flash them for resale. Rather, a customer may use MetroPCS' MetroFLASH® service, by bringing his or her compatible CDMA device into a MetroPCS location and having the device "re-flashed" and placing it in service on MetroPCS' network for a fee. During re-flashing of the device, no copies of the software or contents on the device are made – the process is similar to flipping a switch or changing a variable in a particular "cell" of a spreadsheet. If the exemption is not renewed for an additional three years, many potential MetroPCS' subscribers who would be attracted by the possibility of reusing their existing CDMA-compatible device(s) may not be able to afford to initiate service with MetroPCS, and as a result many would not be able to continue to benefit from wireless services.

Renewal of the exemption is of increasing importance as the wireless industry converges around next-generation 4G LTE technology. Customers should not be bound to a particular network in perpetuity simply to have continued use of the latest cutting edge wireless devices they acquired. Notably, AT&T still retains its blanket policy of locking wireless devices to their network – presumably including the newest and most advanced LTE smartphones.¹⁷ While certain devices may be unlocked after customers jump through enough hoops, AT&T flatly refuses to unlock all devices that are exclusive to AT&T, a policy that likely results in the refusal

¹⁶ Customers may either flash the device themselves or have MetroPCS, as the customer's agent, flash the wireless device for the customer. MetroPCS advertises this option as its MetroFLASH® program. ¹⁷See AT&T FAQ on device unlocking, *available at*

http://www.att.com/esupport/article.jsp?sid=55002&cv=820&title=What+is+the+unlock+code+for+my+phone%3F# fbid=o-GBb0GQWpH.

to unlock the most popular devices under any circumstances.¹⁸ Carriers also appear intent to frustrate customer efforts to use their current wireless devices to access competing networks,¹⁹ including tablets, which represent an increasingly important part of the consumer wireless ecosystem.²⁰ Given the facts that carriers continue to lock devices to their networks, are extending such anti-consumer policies to other devices used to access communications services, and there are a substantial number of locked devices already in the marketplace, the Copyright Office should renew this important exemption.

III. STATUTORY FACTORS

17 U.S.C. § 1201(a)(1)(C) directs the Copyright Office to evaluate the following factors when considering an exemption:

- (i) the availability for use of copyrighted works;
- (ii) the availability for use of works for nonprofit, archival, preservation, and educational purposes;
- (iii) the impact that the prohibition on the circumvention of technological measures applied to copyrighted works has on criticism, comment, news reporting, teaching, scholarship, or research;
- (iv) the effect of circumvention of technological measures on the market for or value of copyrighted works; and
- (v) such other factors as the Librarian considers appropriate.

When these factors are properly balanced, it is clear that the harm caused by the locking

of wireless devices outweighs any adverse impact that may occur pursuant to granting the

proposed exemption.

¹⁸ AT&T's website states that it will not provide the unlock code for any devices "sold exclusively by [AT&T]." *Id.* ¹⁹ Darren Murph, "Verizon locking WiFi on Motorola Xoom until you buy one month of data service?" Engadget (Feb. 6, 2011), *available at* <u>http://www.engadget.com/2011/02/06/verizon-locking-wifi-on-motorola-xoom-until-you-buy-one-month-of/</u>.

²⁰ Recent reports indicate that the market for tablets has grown more than 300 percent year-over-year. Jacqui Chang, "Report on tablet growth shows market is ripe for iPad competitor," Ars Technica (Sep. 14, 2011), *available at* <u>http://arstechnica.com/apple/news/2011/09/repot-ipad-share-of-tablet-market-inches-upward-as-android-suffers.ars</u>.

A. Availability for use

It is unquestionable that wireless device locking makes these products less useful for customers and limits their legitimate ability to receive copyrighted works.²¹ A consumer that has fulfilled the terms of a wireless services contract and wishes to switch providers may be prevented from doing so by an artificially restrictive device lock. This is particularly true since the four largest carriers – Verizon, AT&T, T-Mobile and Sprint (all of whom lock, or previously have locked, their wireless devices) – account for nearly 275 million subscribers, representing the substantial majority of wireless customers in the nation.²² This means that a high percentage of wireless customers are being restricted from full and fair use of their lawfully acquired wireless devices and lawfully licensed copyrighted works after the fulfillment of their initial carrier contract terms. Further, many users download copyrighted works onto their wireless devices – such has ringtones, songs, movies, and applications. If the user has to change carriers and devices, the user will likely lose access to those lawfully licensed copyrighted works – in some cases requiring such users to relicense for a fee copyrighted works for which they have already paid. Accordingly, it is clear that an exemption is needed for this class of works to ensure that the underlying work (*i.e.*, the operating system powering the device and all copyrighted works which are licensed without regard to the serving carrier²³) is available for use by the customers that own it.

²¹ Wireless devices can be used to access copyrighted material, and the fact that they are locked to a particular service may limit their ability to access copyrighted works.

²² Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services, ¶ 31, Table 3, FCC 11-103, WT Docket No. 10-133 (rel Jun. 27, 2011) ("Fifteenth Report").

²³ To the extent copyrighted works are available only on certain carriers, flashing a device will not make such copyrighted works available on other networks.

B. Availability for use of works for nonprofit, archival, preservation, and educational purposes

To the extent nonprofit, archival, preservation and educational institutions use wireless devices, they will be benefitted by the exemption because they will have to spend less over time for wireless devices and their choice for wireless services will be greater. Further, there should be no cause for concern that the renewal of an exemption permitting users to bypass artificially restrictive device locks will limit or harm the ability of the firmware for use for nonprofit, archival, preservation and educational purposes. MetroPCS is not aware of any such harms that have resulted from the exemption since its inception in 2006 nor since its renewal in 2010.

C. Impact on criticism, comment, news reporting, teaching, scholarship or research

Similarly, there should be no cause for concern that the renewal of an exemption permitting users to bypass artificially restrictive device locks will limit or harm the ability of the firmware for use in criticism, comment, news reporting, teaching, scholarship or research. As with the third factor above, MetroPCS is not aware of any such harms that have resulted from the exemption since its inception in 2006 nor since its renewal in 2010.

D. Impact on the market for or value of the protected work

Permitting customers to take their devices along with them when they switch wireless networks has little or no effect on the market for device firmware or for devices themselves. In fact, the ability to use a device on multiple networks would <u>increase</u> the value of a device to customers and could lead device manufacturers to be able to include more features and functions in devices. Indeed, in the 2010 proceeding, the Register found that there was "absolutely no evidence demonstrating that copyright owners of content found on mobile phones have been

harmed by the current regulation designating this class of works."²⁴ Nor is there harm to the carriers selling the devices. Wireless carriers that choose to subsidize devices to entice customers to utilize their service typically lock customers into a long-term contract. Those subsidizing carriers then recoup the value of the subsidy over the term of the contract or via early termination fees charged to customers who break the contract prior to its expiration. In either case, the carrier recoups its subsidy (or, as is more likely, far more) over the course of the customer-carrier relationship. This is consistent with the Register's 2010 finding that "wireless providers . . . have not demonstrated that they have been harmed in any way by the existing exemption."²⁵ The same remains true today. In addition, to the extent that it is claimed that device locks are in place to protect non-firmware content (such as ringtones, music, etc.), a customer that downloaded and paid for such content is entitled to make fair use of that content. The fact that a customer switches networks does not mean that he or she should be denied the benefits of lawfully obtained content for which they have already paid. Indeed, if customers cannot re-use their wireless devices, they may be less willing to license copyrighted works, which will deter the creation of copyrighted works and negatively impact the market for copyrighted works.

E. Other factors

As the Register previously found, "[t]he purpose of this rulemaking is not to . . . maintain the profitability of a particular corporation or industry."²⁶ And, "the ability of a mobile phone customer to use her phone on alternative wireless networks, a noninfringing act, is indeed

²⁴ *Recommendation of the Register of Copyrights* at 150. Interestingly, not a single equipment manufacturer filed comments opposing the exemption that MetroPCS proposes to renew.

²⁵ *Id.* at 152.

²⁶ *Id.* at 154.

adversely affected" by device locking. As demonstrated herein, renewing this exemption will promote competition in the wireless industry, promote the development of entrepreneurs and small businesses, and protect the environment.²⁷

In sum, these MetroPCS comments demonstrate that it is likely that adverse effects are more likely than not to occur if the proposed exemption is not renewed. Accordingly, the statutory factors point towards a renewal of the previous exemption.

IV. SOFTWARE LOCKS ARTIFICIALLY PREVENT WIRELESS DEVICES FROM ACCESSING COMPETING CARRIERS' NETWORKS

Software locks chain wireless devices to one network and are used by carriers not to protect any legitimate copyright interest, or to protect their interest in copyrighted works, but rather primarily as a means to protect their particular business model. Without software locks, most devices are technically capable of being used to receive service on multiple compatible wireless providers' networks, thus enabling end users to switch carriers without incurring the costs associated with acquiring a new device and to use all licensed copyrighted works in the process. Indeed, limiting the use of already licensed copyrighted works reduces the value of copyrighted works, and reduces incentives for the creators of copyrighted works to undertake the effort to create such works. Wireless provider code (SPC) locking, system operator code (SOC) locking, band order locking and Subscriber Identity Module (SIM) locking or UICC.²⁸ Certain of these locks prevent access to any portion of the software contained on the device, while others lock the device to certain restricted features on the device. Software locks may serve some

²⁷ *Id.* at 145-48.

²⁸ CDMA devices do not utilize SIM cards so CDMA carriers do not lock devices using SIM card locking. However, UICC cards are used by LTE devices, the 4G technology that the majority of carriers have selected.

legitimate, non-copyright related purposes, like preventing a customer from attempting to reset their own device and harming it in the process, preventing customers from inadvertently voiding warranty terms, or ensuring that only a qualified technician is programming the wireless device. Despite the existence of legitimate non-copyright uses, however, these locks are often used inappropriately to prevent a wireless device from being used on compatible networks of other service providers.

V. UNLOCKING WIRELESS DEVICES FOR USE ON COMPETING NETWORKS IS A NONINFRINGING USE

Customers who choose to unlock their devices to obtain service on competing wireless networks – a practice commonly referred to in the industry as "re-flashing" the device – are making a noninfringing, fair use of copyrighted works that they rightfully own. In the re-flashing process, the carrier is merely changing the variables in certain memory locations and updating the preferred roaming list to make the device useable on the new network.²⁹ In fact, in their native state, these devices are capable of connecting to a vast range of wireless networks depending on the value of the pre-set variables, and these variables are intended by the creator of the copyrighted work to be altered to allow the device to operate on a given network. Neither customers, nor mobile wireless device companies that offer re-flashing services at the request of a customer, are copying mobile software or using it for any unauthorized purpose.

²⁹ The information being changed on the device during re-flashing is exactly the same information set by the carrier who initially places the device in service sets, and such information – or input data – is intended by the software writer to be customized by the carrier to set carrier-specific values. For example, the carrier needs to set the network identification for the home system, whether the device will be permitted to roam and on what networks. The preferred roaming list is a list of system identification codes of networks with which the carrier providing the service has agreements to allow the device to be used. Each carrier has a different preferred roaming list based on its own networks and contractual agreements it has with third parties. This list is intended to be customized by the carriers and is routinely changed by carriers as they establish or change relationships with third parties for roaming service.

A. Unlocking or Re-Flashing a Device Does Not Create an Infringing Derivative Work

Re-flashing a device does not change the underlying mobile wireless device software, but rather it merely changes underlying variables accessed by the program, variables intended by the software designer to be changed or intended to be used by the software or firmware. A good analogy would be a user inputting revised data into the "cells" of a spreadsheet program, while leaving unchanged formulas that determine expressly how the spreadsheet performs functions on the input data. At no time does the company unlocking the wireless device read the proprietary operating system code because re-flashing a wireless device is purely a write (as opposed to read) operation.

Even if such a minor, write-only operation were to be construed as changing the underlying mobile wireless device operating system code – which should not be the case – such changes would be permitted so long as they were solely for the purpose of enabling the consumer to choose the carrier's network to support use of his or her device. 17 U.S.C. § 117(a)(1) includes an exception for altering copyrighted computer programs provided that "such a new copy or adaptation is created as an essential step in the utilization of the computer program in conjunction with a machine and that it is used in no other manner."³⁰ Since the changes being made to the device software are identical to the ones made routinely by the selling carrier to make it operate on its network, there can be no serious argument that the re-flashing does not fit squarely within the exception. The Copyright Office adopted this position in the 2010 Final *Rule*, stating that, even where more substantial changes were made, "those changes would be privileged under Section 117, which permits the making of 'a new copy or adaptation' that is

created as an essential step in the utilization of the computer program in conjunction with a machine."³¹

B. Altering Mobile Wireless Device Software Does Not Implicate Copyrights Held by Wireless Providers

In general, the underlying mobile wireless device operating systems that some wireless providers purport to protect through device locking are not copyrighted by those wireless providers themselves. Rather, they are created and owned by device manufacturers and have been at most customized for the wireless provider and the wireless provider's systems and services. Indeed, the software locks used by carriers often are not designed to protect the interests of the copyright owner – but rather to protect the wireless carrier's own business interests – *e.g.*, to discourage customer migration. In the 2010 *Final Rule*, the Copyright Office determined that "there appear to be no copyright-based reasons why circumvention under these circumstances should not be permitted."³² Indeed, the *Final Rule* determined that "[w]hen specific codes or digits are altered to identify the new network to which the wireless device will connect, those minor alterations of data . . . do not implicate any of the exclusive rights of copyright holders."³³ The facts underlying these Copyright Office determinations have not changed over the past two years and will remain true throughout the renewal period.³⁴

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³⁰ 17 U.S.C. § 117(a)(1).

³¹ *Final Rule* at 43831.

³² *Id.* at 43831.

³³ *Id.* at 43831.

³⁴ These software locks are not placed on devices by the manufacturers to protect their software, but rather are done so at the request of the wireless carrier. Indeed, no manufacturer has even opposed the exemption previously.

Since wireless carriers themselves make the same changes to the device software that are made in order to make the device useable on their own network, it is clear that certain wireless carriers are trying to use the anti-circumvention prohibitions as a means to enforce their non-copyright related contracts by keeping customers tied to their networks. In general, the anti-circumvention prohibition was designed to keep copyright owners from having their works duplicated, displayed, or used without their permission. Since the re-flashing of a wireless device does not cause a copy of the software to be made, and the user is not displaying or using the software except in connection with the device, the purposes behind the anti-circumvention prohibition would not apply and neither should the prohibition. Certain wireless providers are simply using § 1201 as a back-door method for controlling customer turnover, not preventing improper access to the device software. In addition, the copyrights that they purportedly protect are, in fact, not copyrights that the providers have any legal claim to defend.

C. Not Approving the Exemption Will Harm Copyright Owners

Many wireless customers use their devices to license copyrighted works from copyright carriers – such as ringtones, songs, videos, and applications. With the advent of smartphones, the licensing of these copyrighted works has increased dramatically. If users are unable to access this copyrighted material after changing carriers, the price that users are willing to pay copyright owners will decrease because a single work will have a more limited life. As such, if users are unwilling to pay as much for licensing fees, copyright owners will receive less revenue from their copyrighted works, which will disincent them from creating copyrighted works, adapting those works for wireless devices, or making such copyrighted works available in wireless devices. Extending the exemption, however, allows subscribers to continue to use their copyrighted works when they change carriers.

Given that a substantial number of low income as well as minority groups use wireless devices as their primary or sole means of Internet access, if copyright owners do not make their works available for wireless carriers, these segments of the population will not have access to these works – further expanding the digital divide. Copyright owners should be incented to provide their works on wireless devices, and a primary way to allow this is to ensure that users can use such works when they change carriers.

VI. THE AVAILABILITY OF UNLOCKED WIRELESS DEVICES FOR SALE IS INSUFFICIENT TO MEET THE NEEDS OF CONSUMERS

While some unlocked wireless devices may be available for purchase from certain carriers, this prospect does not address the needs of the individual consumer who already has purchased a wireless device. Such a customer with a beloved, or even unloved, device should not be forced to purchase a new device, typically at the cost of several hundred dollars and the loss of all licensed copyrighted works on the device, as a penalty for changing wireless providers. Even if the device was subsidized by the carrier, the customer has compensated the carrier by subscribing to the service for some period.³⁵ The customer owns the device and should have the flexibility to be able to place that device on the network of their choosing. The possibility that certain carriers <u>may</u> unlock devices of customers who have fulfilled their contracts does not eliminate the need for the exemption. Indeed, the Register specifically found that the "wireless industry's unlocking 'efforts' do not adequately permit the non-infringing use desired by proponents."³⁶ The fact that carriers can (and customers often are unaware that they can ask the carrier to) unlock the device is not the same as the customer having the right, without having to

³⁵ If the carrier's minimum service contract does not serve to recoup the subsidy, that is a voluntary business decision that should not be allowed to outweigh the obvious benefits of allowing unlocking.

³⁶ Recommendation of the Register of Copyrights at 154.

go back to the existing carrier, to use his or her device on other networks. Indeed, existing carriers have every reason not to educate their customers about available unlocking services, since the carrier wants to keep the customer in service, and keeping customers in the dark regarding their choices furthers this goal.³⁷ Even if carriers do unlock devices, there are no market forces that will keep the carrier from charging an excessive amount for unlocking or insisting that the customer give other consideration to the carrier (such as staying in service for an additional period of time or wiping all copyrighted material on the device). Absent an exemption, the carrier has a monopoly on unlocking devices and the Copyright Office must expect that they will act as a typical monopolist, charging monopoly rents to provide services such as unlocking. This fact is confirmed by the Register's finding that it "seems clear that the primary purpose of the locks is to keep customers bound to their existing networks."³⁸

Some wireless providers previously argued that the subsidies they provide negate any equipment cost barrier to entry for switching networks.³⁹ This is not true. Having to buy even a low-cost device be a significant disincentive for low- or fixed-income consumers to switch providers. Many customers simply cannot justify paying for a new device when they already possess one that would be fully functional on a competing system but for the carrier lock. This subsidy argument also ignores the fact that changing carriers without bringing along a device will require a repurchase of copyrighted content – which may result in substantial additional fees to consumers. Further, the subsidy argument incorrectly presupposes that all carriers offer the same service and subsidize their devices to the same extent – which simply is not true. For example,

³⁷ Indeed, carriers are further incented to not educate consumers on the fact that unlocking would prevent them to continue to use their already-licensed copyrighted works. Since licensing fees can be substantial, the carriers can use the prospect of having to relicense as a further deterrent to changing carriers.

³⁸ Recommendation of the Register of Copyright at 154.

MetroPCS offers unique service plans that are unmatched by their competitors, but generally does not subsidize the cost of devices to the same extent as its competitors. Absent an unlocking exemption for wireless devices, a customer who wants MetroPCS' service might have to purchase a new device with no substantial subsidy – which could act as a barrier when that customer has already paid back the subsidy to the first carrier. Also, since many of MetroPCS' customers are less able to afford to make initial cash outlays and to incur high recurring monthly expenses, are less able to afford to release all existing copyrighted works, and may not have credit to cover these expenses, the alternative being extended by the other carriers is hollow. Simply put, those customers would have to go without wireless service.

The subsidy argument also fails to take into account the many additional and incidental costs associated with purchasing a particular device that wireless providers do not subsidize. The cost of accessories for a new device – such as car chargers, wall chargers, ear pieces, cases and holsters – can be significant. In many instances, these accessories are unique to a particular device model and will not work if an end user has to acquire a different device when changing carriers.⁴⁰ In addition to the dollar cost of new accessories, there is an investment of time and energy associated with learning the new wireless device's features and functions, transferring phone numbers, addresses and re-activating email accounts on a new wireless device. And, some consumers are resistant to having to relearn the features and functionalities of a new device, preferring to retain a device with which they are familiar. All of these factors act as barriers to

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³⁹ Comments of CTIA – The Wireless Association, Docket No. RM 2008-08, 4 (Feb. 2, 2009).

⁴⁰ It is MetroPCS' experience that customers can on average spend upwards of \$40 on accessories for each new mobile wireless device that they purchase.

customers migrating from service provider to service provider and would be easily removed if the exemption were renewed.

VII. THE BENEFITS TO CONSUMERS OF AN UNLOCKING EXEMPTION FAR OUTWEIGH THE POTENTIAL HARM TO COPYRIGHT HOLDERS

A. There is a Clear Desire for Re-Flashing Services Among Consumers

Since the Copyright Office granted the exemption for wireless devices in the 2006 anticircumvention proceeding, a significant number of consumers have used the re-flashing services provided by competitive wireless service providers. MetroPCS, through its wellreceived MetroFLASH® program, has allowed a significant number of consumers, many of them new customers to MetroPCS who might otherwise have been unwilling or unable to switch wireless providers, to have an increased choice of wireless options and be able to reduce their wireless costs. If the exemption for unlocking wireless devices is not continued for an additional three years in this proceeding, future wireless customers will not enjoy the pro-competitive and cost savings benefits of these re-flashing services.

There have been significant changes in the wireless industry since the Copyright Office last reviewed DMCA exemptions back in 2010. Most notably, AT&T announced its proposed merger to T-Mobile.⁴¹ In filing an antitrust suit against the applicants of the proposed transaction, the Department of Justice concluded that "[b]ecause competitive decisions affecting technology, plans, prices, and device offerings are typically made at a national, rather than local, level, the rivals that affect those decisions generally are those with sufficient national scale and scope, i.e., the Big Four [AT&T, Verizon, Sprint, T-Mobile]."⁴² This increasing wireless

 ⁴¹ Commission Opens Docket for Proposed Transfer of Control of T-Mobile USA, Inc. and its Subsidiaries from Deutsche Telekom AG to AT&T Inc., Public Notice, WT Docket No. 11-65, DA 11-673 (Rel. Apr. 14, 2011).
 ⁴² United States of America v. AT&T, Plaintiff Complaint, ¶ 19

industry consolidation, and the continuing efforts of the dominant wireless providers to sign exclusive contracts with device providers,⁴³ makes device flashing more important than ever to consumers and competition. The FCC has specifically found that "devices directly affect the quality of a consumer's mobile wireless experience."⁴⁴ Furthermore, devices "are increasingly central to the dynamics of the overall wireless market, and play an increasingly important role for consumers as a basis for choosing providers."⁴⁵ As devices become an increasingly important part of consumers' decision-making process, it also becomes increasingly important to ensure that these devices are not "locked" to a single provider.

In many cases flashing devices also enables customers to use services that they otherwise may be unable to access. When customers are "locked in" to one service, the serving carrier has far less incentive to expand and improve the scope and nature of service in order to meet customer needs and to match competitive offerings. Additionally, eliminating the exemption for mobile wireless devices may create confusion for customers already participating in programs like MetroFLASH®. Consumers may wonder whether they now possess illegal devices, or whether their devices will stop working. Such concerns further chill the ability of consumers to switch wireless providers.

⁴³ Carriers are increasingly looking towards device exclusivity as a method of "locking in" customers. Studies indicate that 24% of consumers make their wireless decisions based solely on device availability, with another 28% making decisions based on a combination of quality of service and available device. *See* Chang, Rita "Proof that handset brands help sell wireless plans," *RCR Wireless News*, Oct. 28, 2008.

⁴⁴ Applications of AT&T Inc. and Deutsche Telekom AG, Staff Report and Findings, ¶ 117, DA-11-1955, WT Docket No. 11-65 (rel. Nov. 29, 2011).

⁴⁵ *Id*.

B. The law disfavors equitable servitudes on personal property

Once a customer has purchased a wireless device, he or she owns that device. While there may be some contractual obligations in the form of service agreements, those relate to the contract between a customer and the wireless provider, not to after-purchase use of the device. Once customers own the wireless devices, the law dictates that they are able to do with them as they please. The common law disfavors restraints on alienation, particularly in the case of personal property and chattels, preferring that the free flow of commerce not be hindered by the "dead hand" requirements of the original owner. Legal scholars have observed, "Where chattels are involved…the policy in favor of mobility creates even stronger cause for courts to hesitate and scrutinize carefully factors of social desirability before imposing novel burdens on property in the hands of transferees."⁴⁶

The Supreme Court has recognized this principle, citing with approval language from the Sixth Circuit that held, "The right of alienation is one of the essential incidents of a right of general property in movables, and restraints upon alienation have been generally regarded as obnoxious to public policy, which is best subserved by great freedom of traffic in such things as pass from hand to hand."⁴⁷ Significantly, this important principle is not an ancient relic of legal history. Justice Breyer cited the principle at oral argument in January, 2008, declaring, "[T]here's a doctrine that you cannot impose equitable servitudes on chattel."⁴⁸ Accordingly, the

⁴⁶ Chafee, Jr., Zechariah, *The Music Goes Round and Round: Equitable Servitudes and Chattels*, 69 HARV. L. REV. 1250 (1956).

⁴⁷ Dr. Miles Medical Co. v. John D. Park & Sons Co., 220 U.S. 373, 404 (1911) quoting John D. Park & Sons Co. v. Hartman, 153 F. 24, 39 (6th Cir. 1907).

⁴⁸ Transcript of Oral Argument at 21, Quanta Computer v. LG Electronics, 128 S. Ct. 2109 (2008).

law disfavors the use of software locks in exactly the way the carriers are using them here and the carrier should not be heard requesting that the exemption be denied.⁴⁹

C. Holders of Content Copyrights Are Still Protected

The Register agreed with MetroPCS in 2010 that opponents of the exemption "did not make a persuasive case that consumers are engaged in an infringing activity when they use or access content found on their existing phones after switching to a new carrier."⁵⁰ Consumers should have the use of content the consumer has "already paid for and incurred the benefit of the license" as "the content has not been copied to a new device and the copyright owner has realized the economic benefit of the original license for use of such works."⁵¹ In addition, the proposed exemption only seeks circumvention to permit users to operate devices on alternative wireless networks – not circumvention of individual DRM for other protected works that may be installed on a device.

1. Content copyright holders will still be paid for the use of their content

When a user downloads a copyrighted work to a mobile wireless device, the license fee is paid and the user is entitled to make fair, noninfringing use of that content. Whether the user accesses a ringtone while connected to his or her original wireless network or a competing network, the fact remains that the copyright holder has been paid the license fee for that work for use on that device, and the user deserves to enjoy the benefits of that ringtone for the life of the

⁴⁹ MetroPCS also believes that it is inappropriate for carriers to insert into their agreements that devices may not be used on third party networks, or similarly limit the use of the software to provision the use of services on the carrier's network. Such a limitation would be similar to a car manufacturer inserting a provision in the sales contract that a car may only be serviced at a dealer's service locations. This would be an inappropriate restraint of trade and the Office should consider whether to pre-empt state law to the extent carriers try to use contract provisions to eliminate the rights being sought here. Otherwise, carriers could attempt to make any relief granted here a hollow right easily defeated.

⁵⁰ Recommendation of the Register of Copyrights at 151.

device. Re-flashing does not allow the customer to have any greater use of the original copyrighted work than was originally licensed but merely permits the customer to enjoy its authorized use of the copyrighted work. If the customer is required to change devices, the customer in many instances is not be able to transfer the copyrighted work to the new wireless device and will be forced instead to repurchase the same work, *e.g.*, a ringtone, for the new device. Requiring licensees to have to purchase a new ring tone merely because the carrier on which the device is receiving service wants to restrict migration of the customer by locking the device is not appropriate. Further, since much of the content cannot be improperly transferred to other devices even if the original device is re-flashed, there is little chance that unlocking a wireless device makes licensed content more likely to be inappropriately duplicated or transferred.

Concern over copyrighted content that is subject to a per-use license fee is similarly misplaced. In order to charge customers for accessing a copyrighted work, a program must authenticate itself with the network and charge the consumer. In the case of per-use licenses, attempting authentication on a new network will cause the program to fail and the copyrighted work to be unavailable. At the very least, customers' access to this type of work will be cut off as soon as they cease to pay a license fee by virtue of their being connected to a competing network.

Copyright owners also may benefit from re-flashing by making their content more valuable. Currently, if a customer must repurchase content each time that they change devices, they may be deterred from purchasing content in the later months of use of the device, or at all.

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⁵¹ *Id*. at 151.

Allowing customers to keep using acquired content, even if they change service providers, will make the copyrighted content more valuable and will increase the utility of such copyrighted work to potential licensees.

2. There are no technological barriers to implementing separate locks for network access and downloaded content

Should content copyright holders wish to add extra protection for their copyrighted works, there are no technological barriers to placing specific software locks on these works. In fact, digital certificates are already in use on many devices to protect certain copyrighted works. Unlocking a wireless device is akin to knowing the access password for a desktop computer. While having this password may allow you to review the contents of the hard drive, each individual music file, video, program or game can be separately protected by its own individual access controls. Just as knowing the password to a desktop computer does not give a user the unfettered ability (or license) to access and duplicate protected copyrighted works, unlocking a wireless device for the purposes of networks access need not automatically allow unauthorized access to or copying of downloaded mobile content. Nonetheless, as a general matter where the user who is accessing the copyrighted work is the licensee of the copyrighted work, there should be no legitimate reason to prevent such user from accessing their licensed copyrighted works.

Content copyright holders also should be expected to take reasonable steps to protect their works. Since wireless device unlocking is both a commonly-used and beneficial new tool for wireless consumers, those in the mobile content industry are undoubtedly aware of its existence. As they are aware that devices can be, and frequently are, unlocked, failing to add a separate, narrowly-tailored layer of protection for copyrighted content that resides on these devices is tantamount to a refusal by these copyright holders to reasonably protect their interests.

D. An Exemption for Unlocking Wireless Devices Has Enormous Environmental and Social Benefits

An exemption that allows for the unlocking of wireless devices not only creates tremendous benefits for wireless consumers as detailed above,⁵² but also significantly lessens the impact that the wireless industry has on the environment.

1. **Reusing wireless devices results in a cleaner environment**

The Environmental Protection Agency ("EPA") estimates that each year consumers discard over 130 million mobile wireless devices.⁵³ Over half of these discarded devices are from consumers who are changing carriers.⁵⁴ Many of these consumers do not want to get rid of their functioning devices, but find that they have no choice when the devices will not work on their new wireless network. As a result, only approximately 10 percent of these 130 million devices are reused or recycled.⁵⁵ These discarded wireless devices and batteries present a significant environmental risk, as they contain "a variety of hazardous materials, including toxic metals such as antimony, copper, nickel, lead...[as well as] phthalates and brominated flame retardants, that could potentially leach into the environment after disposal and threaten human health."⁵⁶ Studies estimate that discarded electronic devices will result in 454 million kilograms

http://yosemite.epa.gov/opa/admpress.nsf/e77fdd4f5afd88a3852576b3005a604f/2f0711847e1f1c18852576f80053f5 fd!OpenDocument.

⁵² MetroPCS supports the *Final Rule*'s determination that the exemption "would permit some commercial activity." *Final Rule* at 43831. MetroPCS also confirms its desire that the exemption exclude those "bulk resellers" who "purchase new mobile wireless devices at subsidized prices and, without actually using them on the networks of the carriers who market those devices, sell them for profit." *Final Rule* at 43831-32.

⁵³ "EPA Highlights Recycling Opportunities During National Cell Phone Recycling Week," EPA Press Release (Apr. 1, 2010) ("EPA Release"), *available at*

⁵⁴ A conservative estimate is that of the 130 million devices discarded each year over half, or approximately 77 million, result from customers changing wireless providers. This is based on a conservative 2.0% churn rate a month and approximately 323 million wireless subscriber device connections. *See* "Wireless Quick Facts," CTIA Factsheet (June 2011), *available at* <u>http://www.ctia.org/advocacy/research/index.cfm/aid/10323</u>.

⁵⁵ EPA Release.

⁵⁶ Lincoln, John D., Ogunseitan, Oladele A., Shapiro, Andrew A. and Apohores, John-Daniel M., *Leaching*

of lead entering the environment over the next decade. Wireless devices represent a growing portion of this problem, as their small size makes them susceptible to disposal in landfills, and many consumers do not even recognize wireless devices as a category of toxic waste.⁵⁷ Further, the proportion of electronic waste represented by wireless devices undoubtedly will increase as devices manufacturers shorten the life cycle of devices by introducing new devices in ever shorter periods of time. It should also be noted that there are significant positive impacts to recycling wireless devices, as well. The EPA estimates that every 1 million wireless devices recycled enables the recovery of "75 pounds of gold, 772 pounds of silver, 33 pounds of palladium, and 35,274 pounds of copper".⁵⁸ If all 130 million annually discarded wireless devices were recycled, enough energy would be saved to power 24,000 homes for a year.⁵⁹ As the country seeks to lower energy costs and reduce its dependence on foreign energy, this energy savings may have a meaningful impact.

While several wireless service providers and industry groups offer wireless device recycling programs,⁶⁰ it is far better for the environment if these devices continued to be reused instead of discarded or recycled. Many customers do not wish to get rid of their wireless devices, and an unlocking exemption enables consumers to travel with their device from network to network, taking millions of devices out of the waste stream entirely. For those customers who do wish to get rid of their current device, recycling groups estimate approximately 60 percent of wireless devices can be repurposed, saving significant resources that are otherwise used to

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Assessments of Hazardous Materials in Cellular Telephones, 41 ENVIRON. SCI. TECHNOL. 2572 (Apr. 1, 2007). ⁵⁷ Id. at 2572.

⁵⁸ EPA Release.

⁵⁹ Id.

^{60 &}quot;Plug-In To eCycling Partners," EPA Fact Sheet, available at

recycle them.⁶¹ Allowing consumers to unlock their wireless devices makes it far easier for wireless devices to be repurposed, as it is not necessary to match specific wireless devices with specific user networks.

2. Unlocked wireless devices can be donated to provide a major source of revenue for charitable organizations or given to at-risk citizens for emergency use

Unlocked wireless devices can be donated to organizations that sell the devices to secondary-market consumers and distribute the proceeds to charitable organizations. Unlocked devices are easier for wireless recycling organizations to sell, as they do not have to be matched to a particular network – which means more money can be distributed to charities. Countless charitable organizations use this method of fundraising to great success, including "Cell Phones for Soldiers," a group that uses the proceeds from selling used devices to purchase phone cards that allow soldiers to call home from overseas.⁶² In addition, unlocked wireless devices can be used by at-risk citizens in order to provide them with access to emergency services. Many organizations collect wireless devices to distribute to victims of domestic violence or to senior citizens who may be unable to afford the safety and security that access to wireless communications brings. Organizations like the National Coalition Against Domestic Violence and Phones for Life count on these devices to help them save lives⁶³ – allowing wireless devices to the proceeds to be available to the

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⁶¹ Comments of The Wireless Alliance, LLC and Robert Pinkerton, Docket No. 2008-08, Dec. 2, 2006 at 7.
 ⁶² "Cell Phones Offer Lifeline to Soldiers," CBS Evening News, available at http://www.cbsnews.com/stories/2007/04/03/eveningnews/main2643562.shtml; see also http://www.cbsnews.com/stories/2007/04/03/eveningnews/main2643562.shtml; see also http://www.cellphonesforsoldiers.com/.

http://www.epa.gov/osw/partnerships/plugin/partners.htm.

⁶³ See, e.g., "Save lives and help the environment--donate your used cell phones to NCADV," National Coalition Against Domestic Violence, *available at* <u>http://www.ncadv.org/takeaction/Donateaphone.php</u>.

needy. The value of these beneficial services is increased when the organization has the flexibility to place the unlocked device in service on the particular compatible network that has the best coverage in the area of likely use, rather than being "locked in" to a network that might not provide adequate coverage where needed.

VIII. CONCLUSION

For the reasons set forth above, MetroPCS respectfully requests that the Copyright Office Register recommends to the Librarian that the exemption proposed herein be renewed as proposed.

Respectfully submitted,

METROPCS COMMUNICATIONS, INC.

By: _ land to all

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ATTACHMENT A

Redline of Current Exemption

Computer programs, in the form of firmware or software, <u>including data used by</u> <u>those programs</u>, that enable used wireless telephone handsets <u>devices</u> to connect to a wireless telecommunications <u>communications</u> network, when circumvention is initiated by the owner of the copy of the computer program solely in order to connect to a wireless telecommunications <u>communications</u> network and access to the <u>such communications</u> network is authorized by the operator of <u>the such</u> <u>communications</u> network.